Session A – 12:15 – 12:22 pm

Treatment of Severe Flatfoot Deformity with TAR and Multi-level Osteotomy in a Single Step Procedure

Presenting:

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Summary:
The pantalar fusion is a treatment of choice in 4th degree flatfoot deformities but a persistent disability follows after that procedure. That’s why a combination technique with a TAR and a multi-level corrective procedure was developed.

In the comparison between 280 conventional TAR and 34 TAR with a multi-level one-step procedure there were - despite the worse condition before – a higher improvement and equal results in the complex treated group.

Abstract

Introduction:
The current treatment of a 4th degree flatfoot deformity [Johnson/Strom] is a pantalar fusion due to the contract deformity with ankle arthritis, but only limited functional results are reachable. On the other hand in the latest years the TAR became an accepted procedure in cases with isolated ankle arthritis without severe deformity. Therefore normally some operations are necessary to avoid a complete fusion and retain a functional solution – but especially elderly patients are often overstrained.

That’s why the possibility of a single step procedure with the TAR and a multi-level osteotomy procedure were evaluated in a prospective clinical investigation in comparison to the normal TAR procedure.

Methods:
Study: 1/03–10/08
Indication: ankle arthritis with 4th flatfoot deformity vs. ankle arthritis without severe flatfoot deformity
Parameters: clinical (AOFAS-Score, VAS for pain and function); radiological (Hip-to-Ankle AP View, Ankle AP, Foot lateral, Foot AP, Hindfoot Alignment view and a dynamic fluoroscopy check),
Clients: n=334 TAR all together and 314 of 334 patients were evaluated (94 %)
Flatfoot cases (34x) / without flatfoot 280
Follow-up: average 23 (12-71) months /
Age: average 58 (20-88) years

Results:
Necessary procedures to correct the deformity:
Osteotomies:
53/280 (19 %) in the so-called normal arthritis group and 15/34 (44 %) in the flatfoot group
Fusion:
25/280 (9 %) in the so-called normal arthritis group and 18/34 (53 %) in the flatfoot group
Cumulative complication rate
18/280 (6,4 %) in the so-called normal arthritis group and 2/34 (5,8 %) in the flatfoot group

Following operative procedures after the primary step
35/280 (12,5 %) in the so-called normal arthritis group and 4/34 (11,8 %) in the flatfoot group

Postoperative outcome:
Average range of motion in the so-called normal arthritis group 38° and in the flatfoot group 39°
AOFAS-Score: average improvement in the so-called normal arthritis group +53 and in the flatfoot group +67 points

Visual Analog Scale (pain): average 2.3 / (function) average 2.4 in the so-called normal arthritis group and in the flatfoot group: Visual Analog Scale (pain): average 1.9 / (function) average 2.6

Conclusion:
Despite the huge effort in the flatfoot group, there is a good possibility to maintain the sagittal motion and to get good clinical results with a TAR and a multi-level corrective procedure as a single step maneuver without a higher complication rate.